Hitting on All Twelve

by C.E.T. Scharps

RISES in rebuttal of the statement that pedestrians are more careless than motorists one who says that the tab kept by railroads at grade crossings is proof positive that automobilists are indeed a careless lot. These figures show only a minor percentage of car drivers who actually do "stop, look and listen." Most of them hardly slacken speed when they come to a crossing.

We ran across this recently in a motor publication: "While motoring with a railroad man recently, I noticed that he always said it was train time when he saw a railroad crossing ahead. I thought it rather strange that he should know when trains were due at all crossings, so I asked him about it. His answer was, 'It is always train time at a crossing.'"

This is surely a good motto for all automobilists. If they kept it in mind, accidents would be eliminated. But they do not have any such idea in mind apparently. In fact, most of them seem to think it is never train time at the moment when they approach a grade crossing. This goes even when there is a flagman and the gates are down. Some automobilists drive so fast that even when they see a sign warning of a crossing they are on top of the gates before they can slow. How on earth any one in his right mind ever runs through crossing gates is beyond us. But there are plenty who do, and the railroads have the figures to prove it.

How far preventive measures can go without being effective is shown by Hollie L. Reed, of Amsterdam, N. Y. He says that at a dangerous right angle crossings on the road between Amsterdam and Schenectady huge signs made up of the word "Danger" were placed by the motor clubs of both towns. The motorist is apparently running right into "Danger." In spite of that, two accidents, both of them serious, happened in broad daylight at this point. They were caused by automobilists approaching the turn too rapidly to come to a safer stop. How any one can do this sort of thing in daylight is close to incomprehensible. The signs are illuminated at night, but no such accidents have happened when it is dark.

Under such circumstances it does look as if a charge of carelessness lies against motorists. Our thesis is that whatever they may be out on country roads where they fancy themselves safe, motorists in the city—accustomed as they are from the moment of beginning to drive to be under police regulation and direction—are as a whole vastly more careful and more respectful toward constituted police authority than pedestrians. The demounted motorist is a better pedestrian than the non-automobiling user of the streets.

In the Traffic Court

CONSIDERING the publicity given to the law which requires that motorists in greater New York shall have operators' licenses for driving cars, there are all too many cases in the Traffic Court of automobilists summoned for not having their tickets.

Magistrate Cobb, who is sitting while Magistrate House is taking a vacation, has been imposing fines of $10 on automobilists who violate the law. He asks them if they do not read the newspapers and also if they have heard no talk about the garages where they store that such a law exists. This is because the customary plea is ignorance of the law. It is hardly worth while saving $1 to spend $10 later on. Besides you must have the license, so it is as well to conform in the first place.

The other day, when we sat through a session of the Traffic Court, several cases were brought up of taxicab drivers who failed to have rear lights lighted. These men operate in the neighborhood of the Pennsylvania Station. The defence made in many of these cases is that the pavement on Seventh Avenue is so torn up that an oil light is oftentimes jolted out without the driver knowing about it.

Magistrate Cobb expressed himself that unless the city fixes up the streets the Court can hardly be very severe upon the drivers. He is convinced, apparently, as are others who have observed the condition, that the drivers are not entirely to blame. That, of course, does not absolve them from going around in back to have a look when they stop their cars anywhere.

Incidentally, it is worth while noting that Magistrate Cobb appears to handle a great many cases in the course of a day, without uttering speeches about the amount of work he is called on to do. It seems to us he gets through his work so expeditiously by the simple means of cutting out the rigmarole. He does not make a cause ten minutes long, with a full and formal record, out of hearing a charge of failing to obey a traffic officer's signal to which some wagon driver has already pleaded guilty.

The time consumed in the pure formalities by Magistrate House, if saved, would make even the heaviest day seem light. To be sure, it robs the Court of a little parade and denudes it of some of the pomp, but it gets there just the same. Justice appears to us to be done, in about equal measure, by Magistrate Cobb's system.

Vanderbilt Cup Days Outdone

"THE old Vanderbilt Cup race crowd isn't a drop in the bucket compared to the gang of automobiles down at Camp Upton on a Sunday," says a man who visited there recently. "It seemed to me that there was a solid line of cars all the way from Commack down to the Queensboro Bridge when I was there last Sunday. I've never seen so many automobiles all at one time.

"They were strung out—and not too far apart at that—all going about eighteen or twenty miles an hour. The left side of the road, when you were travelling toward New York, had hardly a car on it. I swung out on that side and I believe I went by fully 700 cars on the way in. There were so many new drivers in line that they thought it safest to stay where they were rather than adventure out into the other channel."

When the Rear Wheels "Pace"

LACK of attention to the way the rear wheels are running is a source of subsequent financial loss to automobilists. It seems to us that we see nowadays more cars with wabbly rear wheels than ever before. This may be because the demountable rim lugs are not fully cinched up, so that the wheel runs unevenly. It all makes for wear on tires and shortens their existence unduly. From the back it gives the car, as it moves away, a sort of pacing gait. The front wheels are running in one line and the rear wheels are wabbling in another. This racking action racks the souls of the automobilists.

Taking the "Liberty"

IN DESIGNATING as the "Liberty motor" the United States airplane engine Secretary Baker apparently has overlooked the fact that there exists a prior claim to that designation. The Liberty Motor Car Company of Detroit has been in existence since July 4, 1916. Patriotic considerations will probably impel this concern not to protest against the invasion of its registered rights.

It will grate upon the sensibilities of the Society of Automobile Engineers, whose members have been so active in the development of the aviation power plant, to have it called a "motor." The Society of Automobile Engineers long ago started a campaign to have such things called "engines" reserving the designation "motor" for starting motors.

The War Tax as It Applies To Automobiles, New and Used

SECTION 600 (a)—That on the day this act takes effect, and thereafter on July first in each year, and also at the time of the original purchase of a new automobile or motorcycle by a user, if on any other date than July first, there shall be levied, assessed, collected, and paid, upon the use of automobiles and motorcycles **not used exclusively for business** an excise tax at basic rates as follows: Motorcycles, $2.50; automobiles, the original listed retail price in the United States of which is not over $500, $5; original listed retail price over $500 and not over $750, $7.50; original listed retail price over $750 and not over $1,000, $10; and for each further increase of $500 or fractional part thereof of original listed retail price up to and including the original listed retail price of $3,000, an additional tax of $5; and for each further increase of $500 or fractional part thereof of original listed retail price, an additional tax of $10.

In the case of a tax imposed at the time of the original purchase of a new automobile or motorcycle on any other date than July first, the amount to be paid shall be the same number of twelfths of the amount of the tax as the number of calendar months, including the month of sale, remaining prior to the following July first.

The tax payable in any year shall be **reduced by ten per centum of its basic amount for each twelve months elapsed since the original sale of the** automobile or motorcycle by the manufacturer or importer, but **in no case shall it be reduced to less than fifty per centum** of such basic amount.

Rare Field of Racing Drivers Gathered for Harkness Trophy Contest

Every expression from grave to gay is pictured on the faces of these pilots, who are among the contenders in the Harkness trophy race, which will be held next Saturday at Sheepshead Bay. Chevrolet, on the extreme left, is serious. Next to him, Hearne, who might smile in just a minute. Resta, who has been induced to try a come-back, is essaying a doubtful grin. A little more mirthful is Henderson, who comes next. Ralph de Palma is cheerful indeed, but nothing like the other Ralph, Mulford, who gives vent to a hearty laugh, as one who sees the prize money coming his way. They all will be seen in action at the Bay track, wearing their smiles.

Road Conditions For the Autumn Tourist

This report on road conditions is furnished to The Tribune by the Touring Department of the American Automobile Association.

New York to Washington via Newark New Brunswick, Monmouth Junction, Trenton, Philadelphia, Chester, Wilmington, Elkton, Belaire and Laurel. The road is in excellent condition to Philadelphia except for rough stretches on the Hudson Boulevard. New Brunswick to Trenton is best via Cranberry Turnpike, Monmouth Junction and Old New Brunswick Turnpike, with poor stretch entering Trenton. Philadelphia to Wilmington is good with the exception of short stretch near Holly Oak. Wilmington to Elkton, main road very bad. A detour via Market Street and Hare's Corners to State Road Station is good bitulithic. State Road Station through Glasgow to Elkton fair dirt road. The balance of the route excellent throughout. Leaving Baltimore is best via Wilkins Avenue to St. Mary's Academy, turning left through to Columbia Road.

Philadelphia to Pittsburgh is best via Lincoln Highway, with one detour west of Greensburg.

New York to Atlantic City via Newark, Elizabeth, Rahway, the Amboys, Matawan, Freehold, Lakewood, Toms River, Barnegat, New Gretna, Pleasantville. Good condition throughout with exception of one-half mile in South Amboy.

New York to Kingston, via Tuxedo, Newburgh and River Road, on west side of Hudson River, in excellent condition except for two detours. One between Harriman and Central Valley is three miles over dirt road and is fair in dry weather. The other is at Milton, also about three miles over good dirt road.

New York to Albany, via east side, in good condition to Poughkeepsie, beyond that there are detours at Rhinebeck and Red Hook, which are over good dirt road.

Albany to Syracuse, open throughout.

Syracuse and Buffalo.—Three detours, one at Geneva, the others east and west of Canandaigua.

New York to Buffalo, via Binghamton, is in generally good condition, except poor stretch between Monroe and Goshen five miles of poor road west of Wurtsboro and a three-mile detour in Mamakating Park. The latter detour is bad when wet.

New York to the Berkshires is best via New Rochelle, Mamaroneck, White Plains, Bedford, Purdy, Brewster, Fawling, South Dover, Millerton, Salisbury, Sheffield and Great Barrington, with a short detour at White Plains.

Utica to Thousand Islands.—Excellent condition via Deerfield, Boonville, Lowville, Watertown and Clayton. West of Copenhagen the road is being resurfaced, but no detour necessary.

Kingston to Cooperstown via West Hurley, Phoenicia, Arkville, Grand Gorge and Oneonta is in excellent condition, with one short stretch (about half a mile) under construction between Collier and Milford. Owing to a bridge being down on the west side of Otsego Lake it is necessary to go to Utica via Oaksville, Silver Lake, Richfield Springs, West Winfield and Bridgewater. About twenty miles of this road is ordinary dirt, and in rather poor condition when wet.

New York to Delaware Water Gap.—Main roads still have detours, and the best short route is via Newark, Elizabeth, Summit, Berkely Heights, Liberty Corners, Far Hills, Chester, Hackettstown, Butzville, Delaware and Portland.

New York to Spartanburg, S. C.—New York to Washington, as above noted. Washington to Fredericksburg in good condition, but will be bad if much rain falls. Richmond to Petersburg, rough sand-clay. Petersburg to Kenbridge, good sand-clay to South Hill, poor sand-clay to Clarksville, worn-out macadam to Soudan, fair sand-clay to Oxford; first eighteen miles out of Oxford very poor; balance good macadam to Durham. Durham to Greensboro, worn macadam; very rough in spots. Greensboro to Highmount, fine macadam, good gravel and sand-clay to Salisbury, fine macadam to Kanapolis, rough macadam to Charlotte, worn macadam to Gasgonia, sand-clay to Spartanburg, but poor in stretches.

Upstater Recommends Utica-Ithaca Routing

Automobile Editor of The Tribune.

Sir: I was told that in your edition last Sunday you spoke of the road from Utica to Ithaca, by way of Cazenovia and Woodstock, being bad on account of the detour at Woodstock. As my paper is now going to Dart's Camp, in the Adirondacks, I am unable to verify just what you did say, but the above statement is correct, anyway.

Last week I travelled the road from Ithaca to Utica twice going to and from Dart's, and by far the best route is Ithaca, Cortland, Tully, Fabius, Delphi, Manlius, Chittenango, Vernon, Utica. This is all macadam and registers 101 miles. Between Fabius and Delphi there are detour signs, which should not be followed, as the road is open, and the work going on is only finishing up the shoulders, guard rails, etc.

Delphi is not shown on the Blue Book Map 53, but lies on the road marked with a heavy black line running south from Oran, and is about due west from Webster Station, shown on the Cazenovia road. The new stretch of completed road now fills in the light double lines from there on to Fabius. Delphi is shown on Scarborough's map, though the route is not marked.

There is a beautiful panorama of Oneida Lake and valley when topping the hill between Manlius and Chittenango, and one should look back when coming from Chittenango. It cannot be missed going the other way.

JOHN SOUTHWORTH.

Season's Racing Championship Title Goes With 100-Mile Event at Sheepshead Bay Motor Speedway

With Dario Resta, Ralph de Palma, Louis Chevrolet, Eddie Hearne, Dave Lewis, Ira Vail and a whole lot of lesser lights entered for the Harkness Cup automobile race at Sheepshead Bay next Saturday, a first rate contest is assured. The field of starters is one of the best that has been gathered for a race in months. Getting Resta out of his retirement was a big stroke, for he has been out of racing for a full year. The rivalry among Resta, De Palma and Chevrolet insures good racing.

This race, which will be at 100 miles, is the only big race of the year. To the winning driver will go the $10,000 trophy given by Harry S. Harkness, owner of the speedway; the major portion of the prize money and the glory of being crowned Speed King of 1917.

Resta will probably drive a Peugeot, with which he swept aside all opposition in 1915 and 1916. Resta has been devoting the past year to the construction of a racing machine of his own design, and if it is perfected in time he will drive it in the Harkness race. According to the King of the Speedway, his invention will attain the greatest speed ever reached by a motor-propelled vehicle. If so, he will have to exceed an average speed of 130 miles an hour.

Resta is the biggest prize winner and has won more important races over a stretch of five years than any other driver in auto racing annals. He has won every race, with a single exception, in which he went the route, and that solitary defeat was at the hands of Ralph de Palma. This lone beating was in the Indianapolis Sweepstakes of 1915, for a prize of $50,000. De Palma led to the finish line by a margin of four minutes in the 500-mile race. De Palma, who won the sprint championship at the Speedway a few weeks ago, is confident that he will repeat his triumph of three years ago.

The drivers who are entered for the big race will begin to arrive to-morrow. Their cars are expected to reach the track at the same time, and a majority of them will be whirling their mounts around the track to-morrow afternoon. Practice will be on in earnest before evening. The management will charge no admission to the preliminary trials.

Starter Fred Warner has notified all the drivers to be present at a meeting to-morrow night, when details for the Futurity Handicap and for the Harkness trophy race will be settled. The handicap will be at five heats of ten miles each, with a final of ten miles. The manner of start—flying or standing—will be determined at to-morrow night's meeting. It is likely that all of the drivers in the Harkness race will compete in the handicap, the first of its sort ever held in the East. Promoter William H. Wellman will make a special effort to induce Resta to start in this race also.

In addition to the track events there will be an aerial exhibition by De Lloyd Thompson, who holds the world's record for consecutive looping. Thompson will endeavor to break his own record of forty-five continuous somersaults.

Record performances and a record crowd are expected, inasmuch as the best drivers are entered and because this is to be a popular-priced show.

Foresees Return of Steam for Motive Power

Is the steam automobile going to revive and make another struggle for existence? Is the steam truck going to invade America? Is steam to be tried out again for small tractors of the modern sort?

These are questions that many engineers are asking themselves, and even though no positive answers can be given there is a distinct tendency toward the belief that steam is going to be tried out again on a large scale.

There is every reason why it should be. At the time when steam was practically abandoned for automobile propulsion the chassis was in a half developed state. Axles, springs, frames, in fact all the parts which are common to both steam and gas cars, were far from perfect, while the gas engine was improving much faster than the steam plant. The gas car offered the line of least resistance without a doubt.

In England the steam passenger car never had much vogue since the early Locomobile days, but the steam truck has gained in popularity and is still strong in the market. In America the steam passenger car has had only one representative and the steam truck almost none.

We have now the Stanley and the Doble systems of steam generation, and there are many others which might be devised; one could have almost as many different sorts of boilers and firing as there are sorts of carburetors. There is no difficulty in handling kerosene under a steam boiler, nor is a steam car necessarily more troublesome to maintain than a gas car. The total amount of mechanical knowledge required to run a gas car for a long time without trouble is appreciable, and the same amount of somewhat different knowledge would suffice for steam. It is merely a matter of exchanging familiarity with carburetors and ignition for equivalent wisdom concerning burners and fuel and water feeds.

About 1911 there began a general "treatment" of the gas chassis, which is best described as tidying up. Redundant parts were eliminated, one piece made to do the work of two or three, one cylinder casting to replace six, and so on. Just the same thing will have to be done to the steam plant, and there is at least equal opportunity. There is no reason why we should not discover how to make a steam chassis as neat looking as a gas one. Actually Stanley and Doble have done much along this line, and the steam truck builders of England have been busy also.

Steam is one way out of the fuel difficulty. There may be better ways, since little is known about liquid fuel engines which burn liquid as liquid. As long as the liquid is readily convertible to gas, as was the gasolene of a few years ago, the gas engine is fundamentally more simple than the steam plant, since it eliminates one heat conversion; but when we come to burn liquid direct there is no internal combustion engine known which is really suitable for vehicular purposes.—The Automobile.

Lighting-Up Time

TO-DAY, 6:38 P. M.

Monday, Sept. 17..	6:36	Friday, Sept. 21....	6:30
Tuesday, Sept. 18..	6:35	Saturday, Sept. 22..	6:28
Wed'day, Sept. 19.	6:33	Sunday, Sept. 23...	6:26
Thursday, Sept. 20.	6:31	Monday, Sept. 24...	6:25

Law requires that lamps on all motor vehicles be lighted one-half hour after sunset. This time for the days mentioned is figured above for New York City, New Jersey, Connecticut and Pennsylvania.

More Than 1,400,000 Miles of Roads in U. S.

Statistics for thirty-three of the states of the Union show that in 1916 there were 1,439,297 miles of roads, of which there were 1,439,297 miles of roads, of which about 324,000 were improved highways. Iowa is recorded as having about 111,000 miles of roads, all improved. Ninety-two million dollars was expended on roads in these states in 1916, and more than $50,000,000 was appropriated to be spent this year.

Prison labor is used on the roads in Georgia, Washington, Ohio, Oregon, California, Colorado, West Virginia and Virginia, and also to a limited extent in this state.

Tire Prices Up; Tubes Not So Much Affected

The expected increases in tire prices were marked by the announcement by seven companies of a rise of from 5 to 15 per cent in quotations. This is the third increase since last December and totals approximately 50 per cent since that time. The last rise was in April, amounting to 15 per cent. Last December they rose 15 per cent.

As in former rises, the mounting cost of production and the steady increase in fabric have been responsible for the higher tire prices. It is stated that the fabric now going into one tire costs $4 more than it did several months ago.

Prices of raw rubber are a trifle lower, so tubings are not so much affected.

Radiator Shutter Controlled by the Thermostat

Neither thermostatic control of water circulation, nor radiator shutter for cold weather driving is new, but the combination of them, so that the thermostat controls the shutter, is a novelty found in a recently announced model.

In adapting the thermostat to shutter control, a division into two parts was necessary. The first comprises the usual expansion drum, which is forced open by the action of the gas formed by heat from the contained liquid, operating the shutter through a system of levers. The second part is a thin copper tube, containing the sensitive liquid, and is held in a iron housing placed in the water return line.

At temperatures under 140 degrees Fahrenheit the thermostat is inactive, and the shutters are held closed, permitting little air to pass through the radiator. As the engine warms up and approaches a temperature of 140 degrees the liquid in the return line container starts to change into a gas, creating a pressure upon the expanding drum, causing it to operate and to open the raidator shutter.

This opening action is continued until an engine temperature of 180 degrees is reached, at which temperature the shutter is entirely open. Any variation in engine temperature affects the thermostat, and the shutter is therefore automatically shifted to meet the new conditions.

In addition to the increased convenience obtained by this method of shutter control, it is stated that a marked increase in engine efficiency and economy is effected by this device. High engine temperatures are essential to good performance with the present day low grade fuels, and this is possible with this installation, without the possibility of overheating the engine. The application of the device is found on the Columbia Six.

Testing Tires in Real Road Usage

The six Goodrich tire testing fleets which have been out since March will finish on October 3. There are forty-six automobiles engaged in various parts of the country in the pursuit of destroying tires, in order to see how best they can be made to stand up. Using cars of different sizes, types and weights under all road conditions should surely give a good line.

Last year, with fewer cars, a total of 4,688,412 miles was travelled in tests, using more than 390,000 gallons of gasolene.

Hints on the Care and Feeding of the Speedometer

See that the flexible shaft extending from the speedometer to the pinion which meshes with the gear on the rear of the transmission is not in any sharp bends or turns, as this condition will, if allowed to exist, give serious trouble later. Keep the connection between the speedometer and flexible shaft and between the swivel head and flexible shaft as tight as possible at all times.

Have the flexible shaft properly lubricated. The manufacturer of the speedometer on your car has a special lubricant to be used for this purpose, which will in all probability give the most satisfactory results.

If the dial or pointer of the speedometer vibrates, it is probably due to one of the following causes, any of which may be promptly corrected.

(1) Loose union connection between speedometer and flexible shaft.
(2) Loose union connection between swivel joints and flexible shaft.
(3) Flexible shaft may be bent at a sharp angle, causing the shaft at times to bind, making the dial or pointer unsteady.
(4) The flexible shaft may not be well lubricated, which causes erratic shaft movement and unsteady indication.
(5) The swivel joints may not be properly lubricated.

Failure to indicate speed of mileage will probably be found due to one of the following causes:

(1) Loose union connection between speedometer and flexible shaft.
(2) Loose union connection between swivel joints and flexible shaft.
(3) A link in the flexible shaft may have broken.
(4) The swivel joint gears may have been stripped.

If incorrect speed and mileage are indicated, it is possible that you have changed to oversize tires—not changing the speedometer sprockets; or it is possible that you are driving your car with the tires in such a deflated condition that the speedometer cannot record correctly. The speedometer ratios are of course always figured on a properly inflated tire.

A noisy speedometer head may be due to a loose connection between speedometer and flexible shaft, the shaft may be bent at sharp angles, or the chain in the shaft may be dry.

Under no conditions allow a jeweller or mechanic to open the speedometer head, as it would be impossible for him to calibrate the speedometer even though he could do the actual repair work.—C. L. Hedges, Service Manager, Haynes Automobile Co.

Avoid a Clogged Muffler

It is a good idea to see that your muffler is kept clean, for in this way you will save gasolene. A clogged muffler creates a back pressure which reduces the efficiency of the engine. Tap the muffler with a stick to loosen the deposits and the exhaust will do the rest.

Motor Fuel From Straw Shows Efficiency

The subject of fuel divides with that of tires the honor of being the topic most discussed by motorists. Especially in these days, when saving gasoline is so desirable and desired. Short cuts and economy methods are getting more than their usual share of attention.

Motor fuel from sawdust already has been noted. Now it is reported from Canada that fuel gas—10,000 feet from a ton—can be made out of everyday straw. It is reported that more than 20,000,000 tons of straw are available in Western Canada, for which otherwise there would be very little use.

Thirty to forty tons of this straw will provide the average farmer with light, heat and power for a year, it is said. But most important from the automobilist's point of view is that this straw gas is adaptable to internal combustion engines.

From France comes the word that a mixture 75 per cent denatured alcohol and 25 per cent gasolene is being used successfully in engines. This combustion is charcterized as very satisfactory, "one that affords flexibility and makes starting a cold engine as easy as with a gasolene mixture." The alcohol-gasolene fuel does not require an increase in the oil supply, but its use necessitates that the lubrication system be carefully watched; that is, with the splash or combination splash and force feed that the maximum level be constantly maintained.

French tests lasting for two months indicate that the use of alcohol as a fuel removes any carbon previously existing. After disassembling the engine it is found that the valves, pistons, rings and cylinder are clean and in excellent condition. It is said that part of the lubricating oil slightly enriches the mixture. Tests demonstrated the carbon-removing possibilities of carbodetted alcohol, it cleaning an engine in about three hours.

Relative to a mixture of benzol and alcohol, it is said it can be made in all proportions. In utilizing it, the air may be diminished in the proportion that the alcohol is increased. Benzol is soluble in alcohol in all proportions, and one may augment or diminish the proportion of benzol according to the rise and fall of its price, in order that the price of the resulting fuel may be as low as possible.

The more alcohol used the more the benzol-alcohol mixture resembles that of the alcohol-gasolene combination previously alluded to. When the proportion of benzol is largely increased the resulting mixture takes on the characteristics obtained with gasolene.

Right here in New York a test was made recently of half-gasolene half-kerosene as a fuel. A car which did 26.4 miles on a gallon of gasolene made 28 miles on half-and-half and later 22.6 miles on kerosene alone. The table shows the results:

Fuel used.	Cost, gal.	Mileage.	Cost per mile.
Gasolene	27	26.4	1.02
Kerosene	10	22.6	.44
Half-and-half	18½	28	.66

Kerosene, though the cheapest fuel, reduced power on hills and was responsible for nearly all the carbon deposit. Half-and-half gave results almost identical with those obtained from gasolene.

Keeping Your Radiator Clean Helps Out Engine

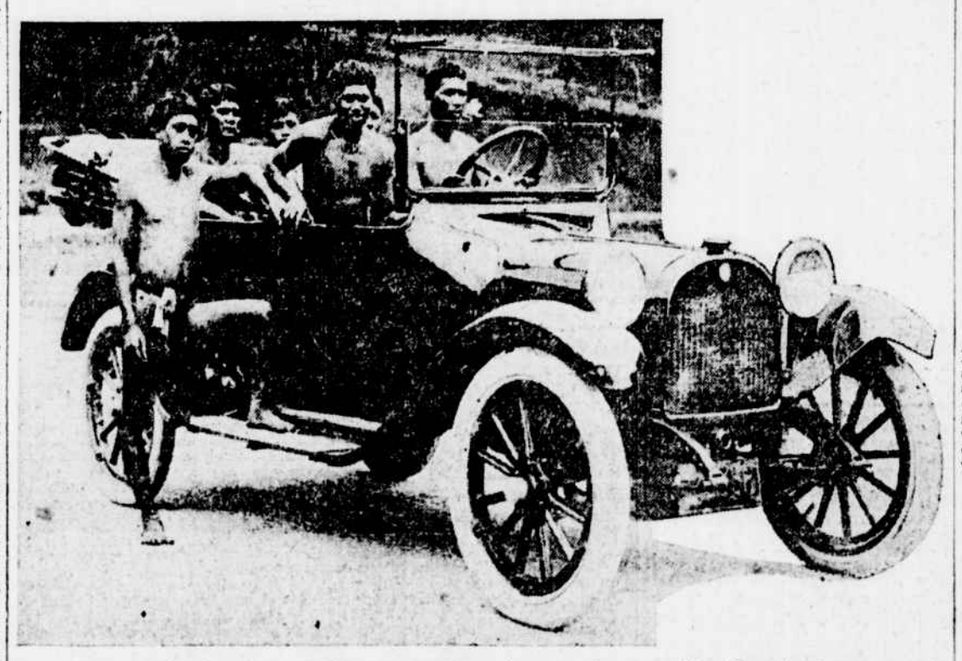
Even with valves ground and carbon cleaned, an engine may show heating. A good plan is to look to your radiator and keep it clean. A half pound of lye dissolved in five gallons of water is a good cleaning solution. Drain your radiator, pour the solution in and run the engine for about ten minutes.

Then allow the engine to cool thoroughly and repeat the ten minutes running. Empty the radiator and run water into the filler opening, the engine still running, until it comes out clean. Whatch your hose connections, that they are not frayed or worn.

Motor Boosters' Outing At Fred Wagner's Farm

The Big Village Motor Boosters, an organization made up of local automobile tradesmen, will have its annual outing at the farm of Fred J. Wagner at Smithtown, Long Island, on September 26. The affair will be under the auspices of the Motor Club. It is expected to be a big party.

You Can See They're Wild About the Car



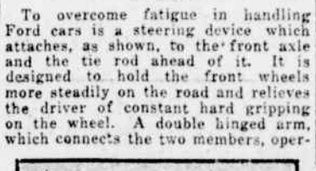
The gentlemen in the form-fitting clothing appear quite at home in the automobile. Note the chauffeur of the Igorrote crowd. He's serious and smoking. If you saw them coming, what would you? Dodge? Read over this caption and you will discover the name of the car; that is, if you are very acute.

New Wrinkles for Car Owners

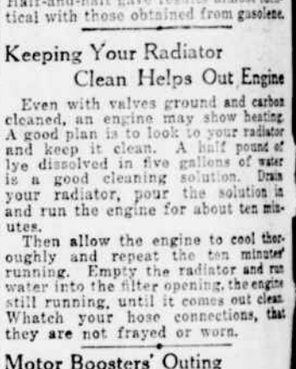
Readers of The Tribune who want to know where any of these things may be had can find out by addressing a request to the Automobile Editor.

By way of a radiator cap device attachment to act as a tell-tale on cooling system conditions comes one that is a small glass fountain operating in a metal holder. As long as the water is circulating and there is enough of it, the fountain plays. The activity of the fountain diminishes as the water supply gets lower and ceases entirely when there is not a proper supply. Provision is made to light the glass tube, so that the operation of the device may be seen at night as well is in daylight. Besides the water cap attachment, there is one that may be mounted on the instrument board. The device is finished in either black enamel or nickel.

To overcome fatigue in handling Ford cars is a steering device which attaches, as shown, to the front axle and the tie rod ahead of it. It is designed to hold the front wheels more steadily on the road and relieves the driver of constant hard gripping on the wheel. A double hinged arm, which connects the two members, operates to eliminate the front wheel tendency to sway. The tension is regulated so as to cause no interference with ordinary steering. When the wheels are pointed straight ahead the tension is greatest. It relaxes gradually as the wheels are turned to either side. The device lists at $5.



For winter or whenever driving conditions require is a windshield cleaner for which particular merits are claimed. This device, which is 7½ inches long, catches over the top of the windshield and is held tightly against the glass by a spring. It is made of steel and has an insert strip of rubber. The device may also, as the illustration shows, operate by being passed between the windshield panes, attaching at the lower edge of top glass. It sells for $2.



A jack with a long handle attachment, operating through a universal joint, so that it works from any angle, is sold in motor car sizes for $8. The jack may be swung under the car by the handle, which, by the way, folds up when not needed for use. It has worm drive and is claimed to be irreversible, except by the operator.